

REMARKS

The rejection of Claims 1-33 and 37-53 under the judicially created doctrine of double patenting over US 6,344,476 is respectfully traversed.

Claim 1 has been amended to modify an element found in the di-substituted thienyl and furanyl compounds of formula I. The substituent R¹ has been renamed R₁₀₀ and redefined by substituting “tert-butyl” for “C₃-C₁₀ alkyl.” Support for this amendment is found in claim 21, which recites the compound “N-(2-Bromo-5-*tert*-butyl-3-thienyl)-N’-(4-methylphenyl)urea.”

Claims 17, 25 and 42 have been amended to modify the definition of the element R^b such that it is not halogen. Claims 20 and 56 have been canceled as not further limiting claims 17 and 42.

Claim 50 has been amended to be independent of amended claim 1, incorporate the original definition of “A” therein and define “B” as a bridged cyclic structure.

Claim 52 has been made dependent on claim 1 to limit the number of independent claims to three.

Claim 55 has been amended to redefine the substituent R¹ as R₁₀₀ to further define the di-substituted thienyl and furanyl heteroaryl groups of “A.”

The amendments above are responsive to the rejection and the cited reference and do not require further search. In that they serve to clarify distinctions between the subject matter claimed herein and that claimed in US 6,344,476, they reduce the issues which are pending and are appropriate under 35 USC 116.

The methods of this invention which employ compounds of formula I where “A” is a heteroaryl group other than pyrrole, thienyl or furanyl (the specific heteroaryl groups of for “B” of US 6,344,476) are clearly unobvious in view of the claims in US 6,344,476. The broad definition for the heteroaryl groups of “A” of US 6,344,476 and the specific heteroaryl groups identified for “B” therein provide no direction to select the heteroaryl groups for the compounds defined in claims 5-16,22-24, 37-41, 44-46 and 48.

The methods of this invention which employ compounds of formula I where “A” is a mono-substituted thienyl or furanyl heteroaryl group are also clearly unobvious in view of the claims in US 6,344,476 since the specific heteroaryl groups identified for “B” in the ‘476 patent all require di-substitution. It would not be obvious to employ mono-substituted heteroaryl groups based on the

specific heteroaryl groups of “B” or the broad optionally substituted heteroaryl groups of “A” within the ‘476 patent. The broad optionally substituted heteroaryl groups of “A” do encompass mono substituted thienyl and furanyl groups and some are listed in claims 6 and 11. However, this disclosure does not suggest substituting the di-substituted groups of “B” for the mono-substituted groups of “A” within the ‘476 patent. The claims in this application which do not define di-substituted thienyl and furanyl compounds are: Claims 17-20, 25-27, 42, 43, 47, 52-54 and 57. This occurs where R^b is hydrogen.

The use of compounds of formula I where “A” is a di-substituted thienyl or furanyl heteroaryl substituted by halogen and a group other than C_{3-5} alkyl would not be obvious in view of the claims within US 6,344,476, in that the heteroaryl groups defined in claims of this patent do require a C_{3-5} alkyl group. Claim 55 herein encompasses the use of di-substituted thienyl and furanyl compounds which have substituents other than C_{3-5} alkyl groups. This claim is unobvious in that there is no direction to exclude or replace this required substituent from the claims of US 6,344,476.

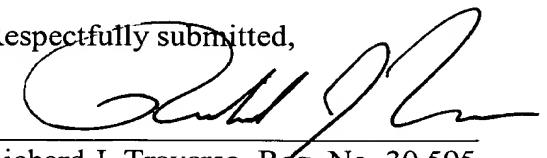
Claims 1-4, 21, 28-34 and 49 herein encompass the use of di-substituted thienyl and furanyl urea compounds where one substituent is halogen (R^b) and the second substituent (R^1) is t-butyl. It would not be obvious to select both tert-butyl and halogen as substituents from the disclosure within the claims of US 6,344,476. Although tert-butyl is mentioned in claim 4 of this patent, there is no direction to select halogen for R^2 or R^3 when R^5 is tert-butyl, such that all of the subject matter within these claims is unobvious.

The use of compounds where group “B” of formula I herein is limited to a bridged cyclic structure is also clearly unobvious in view of the claims in US 6,344,476. The generic and specific disclosure for “A” within the claims of US 6,344,476 provide no direction to select a bridged cyclic structure as is employed in the methods defined in claims 10, 11, 44, 46, 48, 50 and 51. Therefore, these claims are unobvious even though they encompass the use of thienyl and furanyl compounds substituted with halogen and C_{3-10} alkyl.

Based on the above remarks, all claims in this application are unobvious; and thus, also unobvious under obviousness type double patenting.

No fee is believed to be due with this response, however, the Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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